NID

Annual WATER QUALITY REPORT

Reporting Year 2014 (Reported in 2015)

Nevada Irrigation District

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID#: 2910007, 2910004, 2910014, 2910023, 2910006, 3110026

Working Hard For You

This report is a snapshot of the quality of the water the district provided to you in calendar year 2014. Included are details about where your water comes from, what it contains, and how it compares to state standards. The district's goal is to provide safe, high-quality drinking water at the lowest cost to our consumers. We are committed to providing you with information because informed customers are our best allies.

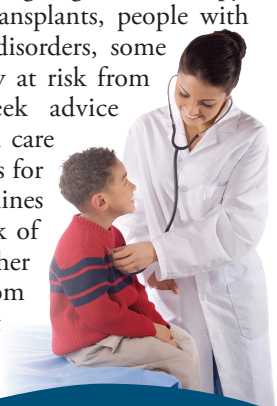
NID Pledges Water Quality– Seeks Public Participation

The Board of Directors encourages public participation on issues concerning our water systems. District policy is set by the elected Board of Directors. Board meetings are held at 9 a.m. on the second and fourth Wednesdays of each month at the NID Business Center in Grass Valley. Check NID's website (www.nidwater.com) or call the Customer Service office at (530) 273-6185 to confirm meeting times.

Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained at http://water.epa.gov.drink/index.cfm or by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.



QUESTIONS?

For additional water quality information, customers may contact NID Treated Water Superintendent Fred Waymire at the district office. In Nevada County, call (530) 273-6185.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

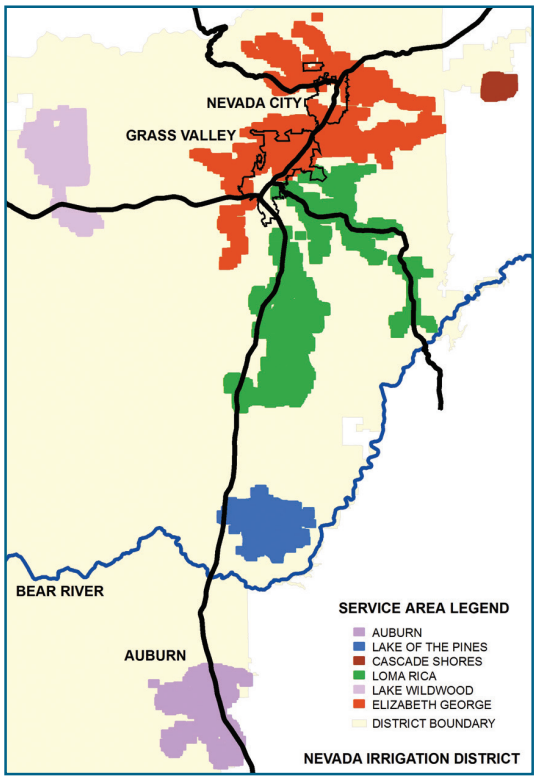
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Water Quality Testing

Effective operation and maintenance of the drinking water distribution system assures that quality drinking water travels through the system to your meter. The residual chlorine in the water after treatment prevents regrowth of organisms during storage and transmission in the distribution system. Annual flushing of water mains and rotation of stored supplies also keeps water fresh and limits growth of organisms. The district conducts weekly water quality testing in the distribution system to ensure that drinking water continues to meet state and federal requirements.

Source Water Assessment

In 2012, NID teamed with the Placer County Water Agency and Starr Consulting to update its Source Water Susceptibility Assessment. This assessment describes the susceptibility and types of constituents that may come into contact with your drinking water source. The report confirmed that district watersheds have very low levels of contaminants. To a limited extent, those contaminants found are usually associated with wildlife and human recreational activity. Leading sources of potential contamination include highways, roadways, and railroads near rivers and raw water canals, septic tanks, unidentified utility pipelines crossing canals, recreation at upstream reservoirs, historic and active mining operations, and utility operations.



Sierra Snowpack is the Source of Your Water

NID treated and distributed more than 2.9 billion gallons of surface water last year. This water originates in the Sierra Nevada snowpack on five mountain watersheds. These include the Middle and South Yuba rivers, the Bear River, north fork of the North Fork American River and Deer Creek.

Most of this water is routed through Lake Spaulding and transported to NID's water treatment plants via canal systems operated by NID and the Pacific Gas and Electric Company.

NID's Faucherie reservoir at 6,100 ft elevation.

Sampling Results

The tables presented here list all the drinking water contaminants that were detected during the 2014 calendar year. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table are from testing done from January 1 through December 31, 2014. The California State Water Resources Control Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some data, though representative of water quality, are more than one year old.

With two of our water systems (Eliz. George and Loma Rica) we participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program in by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality.

REGULATED SUBSTANCES

				North Auburn		Loma Rica		Cascade Shores			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2014	[4.0 (as Cl2)]	[4 (as Cl2)]	0.85	0.20–1.60	0.93	0.46–1.70	0.78	0.34–1.51	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2014	TT	NA	1.35	1.0–2.10	1.01	0.82–1.20	1.15	1.0–1.40	No	Various natural and man-made sources
Cryptosporidium (Units)	2010	Surface water treatment=TT	HPC=NA; Others = (0)	0.0076	0–0.09	0.04	0–0.28	ND	0–0	No	Naturally present in the environment
Fecal coliform and E. coli [Total Coliform Rule] (# positive samples)	2014	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive	(0)	0	NA	0	NA	0	NA	No	Human and animal fecal waste
Haloacetic Acids–Stage 2 (ppb)	2014	60	NA	38.3	23.0–62.0	46.5	17.0–63.0	40.8	20.0–67.0	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	60.3	41.0–76.0	61.0	31.0–74.0	45.8	26.0–62.0	No	By-product of drinking water disinfection
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2014	No more than 1 positive monthly sample	(0)	0	NA	0	NA	0	NA	No	Naturally present in the environment
Turbidity[1] (NTU)	2014	TT	NA	0.038	0.02–0.25	0.031	0.02–0.15	0.028	0.02–0.80	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	100%	NA	100%	NA	97.3%	NA	No	Soil runoff

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	Eliz. George AMOUNT DETECTED	Eliz. George RANGE LOW-HIGH	Lake Wildwood AMOUNT DETECTED	Lake Wildwood RANGE LOW-HIGH	Lake of the Pines AMOUNT DETECTED	Lake of the Pines RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2014	[4.0 (as Cl2)]	[4 (as Cl2)]	0.91	0.69–1.36	0.86	0.50–1.70	0.88	0.45–2.17	No	Drinking water disinfectant added for treatment
Control of DBP Precursors [TOC] (ppm)	2014	TT	NA	1.07	0.85–1.30	1.01	0.95–1.10	1.08	1.0–1.10	No	Various natural and man-made sources
Cryptosporidium (Units)	2010	Surface water treatment=TT	HPC=NA; Others = (0)	0.03	0–0.64	0.0884	0–0.74	0.0266	0–0.36	No	Naturally present in the environment
Fecal coliform and *E. coli* [Total Coliform Rule] (# positive samples)	2014	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive	(0)	0	NA	0	NA	0	NA	No	Human and animal fecal waste
Haloacetic Acids–Stage 2 (ppb)	2014	60	NA	32.5	16.0–43.0	40.3	22.0–59.0	40.0	23.0–65.0	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	46.8	24.0–72.0	60.0	38.0–71.0	51.5	33.0–65.0	No	By-product of drinking water disinfection
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2014	No more than 1 positive monthly sample	(0)	1	NA	1	NA	0	NA	No	Naturally present in the environment
Turbidity[1] (NTU)	2014	TT	NA	0.041	0.02–0.25	0.043	0.02–0.15	0.030	0.02–0.18	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	100%	NA	100%	NA	100%	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	North Auburn AMOUNT DETECTED (90TH%TILE)	North Auburn SITES ABOVE AL/TOTAL SITES	Loma Rica AMOUNT DETECTED (90TH%TILE)	Loma Rica SITES ABOVE AL/ TOTAL SITES	Cascade Shores AMOUNT DETECTED (90TH%TILE)	Cascade Shores SITES ABOVE AL/ TOTAL SITES	Eliz. George AMOUNT DETECTED (90TH%TILE)	Eliz. George SITES ABOVE AL/TOTAL SITES	Lake Wildwood AMOUNT DETECTED (90TH%TILE)	Lake Wildwood SITES ABOVE AL/ TOTAL SITES	Lake of the Pines AMOUNT DETECTED (90TH%TILE)	Lake of the Pines SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	0.3	0.062	0/20	0.069[2]	0/30[2]	0.071[3]	0/10[3]	0.15[2]	0/30[2]	0.081	0/20	0.14	0/20	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2014	15	0.2	0	0/20	0[2]	0/30[2]	0[3]	0/10[3]	0[2]	0/30[2]	0	0/20	0	0/20	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	North Auburn AMOUNT DETECTED	North Auburn RANGE LOW-HIGH	Loma Rica AMOUNT DETECTED	Loma Rica RANGE LOW-HIGH	Cascade Shores AMOUNT DETECTED	Cascade Shores RANGE LOW-HIGH	Eliz. George AMOUNT DETECTED	Eliz. George RANGE LOW-HIGH	Lake Wildwood AMOUNT DETECTED	Lake Wildwood RANGE LOW-HIGH	Lake of the Pines AMOUNT DETECTED	Lake of the Pines RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2014	200	NS	88	NA	74	NA	0	NA	81	NA	57	NA	12	NA	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2014	500	NS	4.8	NA	3.3	NA	3.4	NA	3.1	NA	2.8	NA	5.1	NA	No	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2014	50	NS	NA	NA	29	0–58	NA	NA	NA	NA	NA	NA	32	0–64	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2014	1,600	NS	84	NA	64	NA	70	NA	77	NA	71	NA	81	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2014	500	NS	12	NA	8.2	NA	7.8	NA	12	NA	9.9	NA	11	NA	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2014	1,000	NS	46	NA	36	NA	44	NA	44	NA	42	NA	52	NA	No	Runoff/leaching from natural deposits

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	North Auburn AMOUNT DETECTED	North Auburn RANGE LOW-HIGH	Loma Rica AMOUNT DETECTED	Loma Rica RANGE LOW-HIGH	Cascade Shores AMOUNT DETECTED	Cascade Shores RANGE LOW-HIGH	Eliz. George AMOUNT DETECTED	Eliz. George RANGE LOW-HIGH	Lake Wildwood AMOUNT DETECTED	Lake Wildwood RANGE LOW-HIGH	Lake of the Pines AMOUNT DETECTED	Lake of the Pines RANGE LOW-HIGH
Alkalinity (ppm)	2014	15	NA	13	NA	18	NA	16	NA	16	NA	16	NA
Hardness (as CaCO3) (ppm)	2014	25	NA	22	NA	13	NA	25	NA	23	NA	28	NA
pH (Units)	2014	7.6	NA	7.4	NA	7.5	NA	7.6	NA	7.5	NA	7.5	NA
Sodium (ppm)	2014	4.8	NA	3.2	NA	8.8	NA	3.6	NA	3.6	NA	3.7	NA

UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Loma Rica AMOUNT DETECTED	Loma Rica RANGE LOW-HIGH	Eliz. George AMOUNT DETECTED	Eliz. George RANGE LOW-HIGH
Chlorate (ppb)	2014	145	200–1,900	118	85–150
Chromium VI [Hexavalent Chromium] (ppb)	2014	0.83	0.058–0.11	0.16	0.11–0.16
Strontium (ppb)	2014	32	25–38	42	38–45
Vanadium (ppb)	2014	0.23	0.23–0.24	0.33	0.29–0.36

[1] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration systems. Values are average yearly turbidity.
[2] Sampled in 2012.
[3] Sampled in 2013.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.